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(54) Title: METHOD AND DEVICE FOR DETERMINATION OF TISSUE SPECIFICITY OF FREE FLOATING DNA IN BODILY FLUIDS

(57) Abstract: The present invention relates to methods for detecting free floating nucleic acids, as present in not cellular bound nucleic acids in bodily fluids like plasma or serum fractions of human or animal blood or in any other tissue samples derived from the human or animal body in order to diagnose a cell proliferative disease. Specifically the invention relates to the detection of increased levels of nucleic acids in bodily fluids. Furthermore the invention allows to determine the source of the enriched DNA by measuring the ratio of DNA originating from a certain organ versus total DNA from other organs in a given bodily fluid sample by specifying the DNA's methylation pattern. This can be done with or without increasing the DNA concentration of a given biological sample. In a preferred embodiment a further analysis of this methylation pattern allows for the detection of the presence of tumourous or otherwise proliferative disease in said organ.